

ABSTRACT

An actuation system for causing movement of a fluid flow diverter. The actuation system includes a drive frame assembly, a crank arm assembly and a ball screw assembly working in combination as an electromechanical device suitable for movement of diverter devices of a wide range of sizes. The drive frame assembly is connected to the diverter. The crank arm assembly is attached to the diverter's diverting component, such as a damper flap. The crank arm assembly is connected to the ball screw assembly such that movement of the ball screw forces pivotal movement of the crank arm and, in turn, the diverter's diverting component. A variable speed motor causes linear movement of a ball screw along a fixed rod, with the crank arm assembly connected to the movable ball screw. A drive lockout assembly ensures that movement of the ball screw occurs only under controlled conditions.